

US-PAT-NO: 4008341

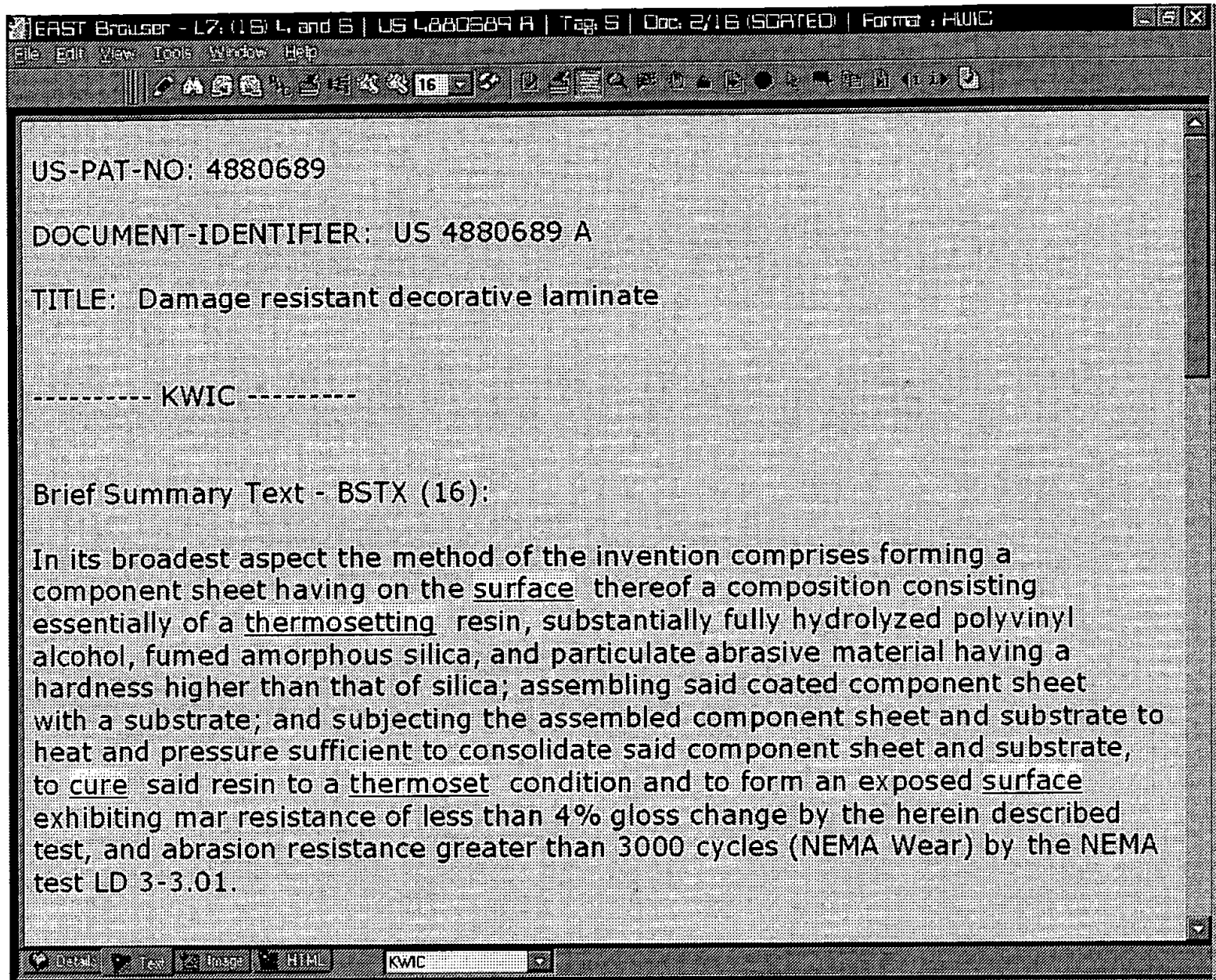
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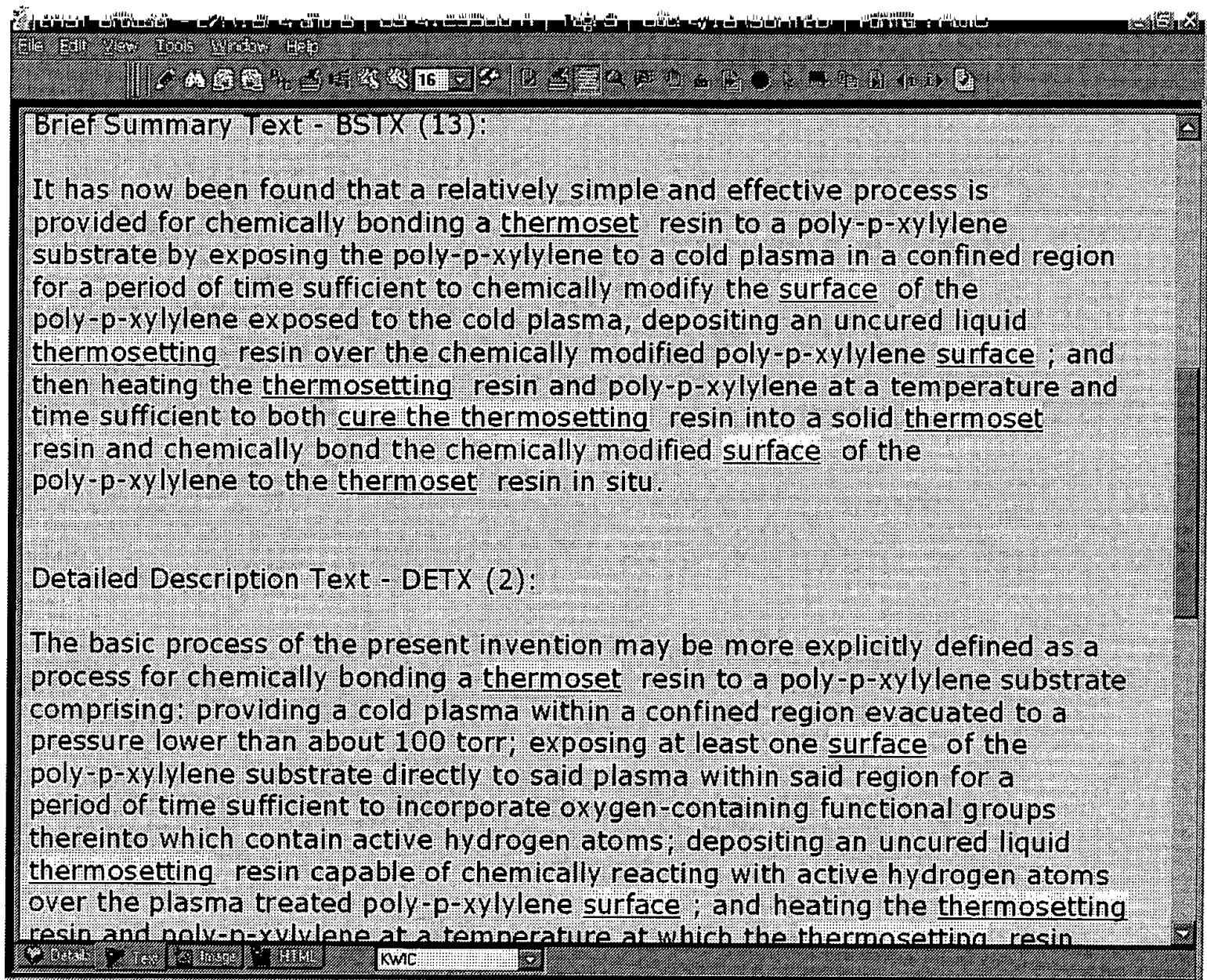
TITLE: Curable liquid polymer compositions

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Detailed Description Text - DETX (109):

The solid cured polythioether polymer products resulting from the instant invention have many and varied uses. Examples of some uses include but are not limited to adhesives; caulks; elastomeric sealants; coatings; encapsulating or potting compounds; liquid castable elastomers; thermoset resins; impregnants for fabric, cloth, fibrous webs and other porous substrates; laminating adhesives and coatings; mastics; glazing compounds; photoresists; fiberglass reinforced composites; sizing or surface finishing agents, filleting compounds; cure in place gasketing compounds; rocket fuel binders; filaments and fibers; foamable thermosetting resins or elastomers; molded articles such as gaskets, diaphragms, balloons; automobile tires, etc.



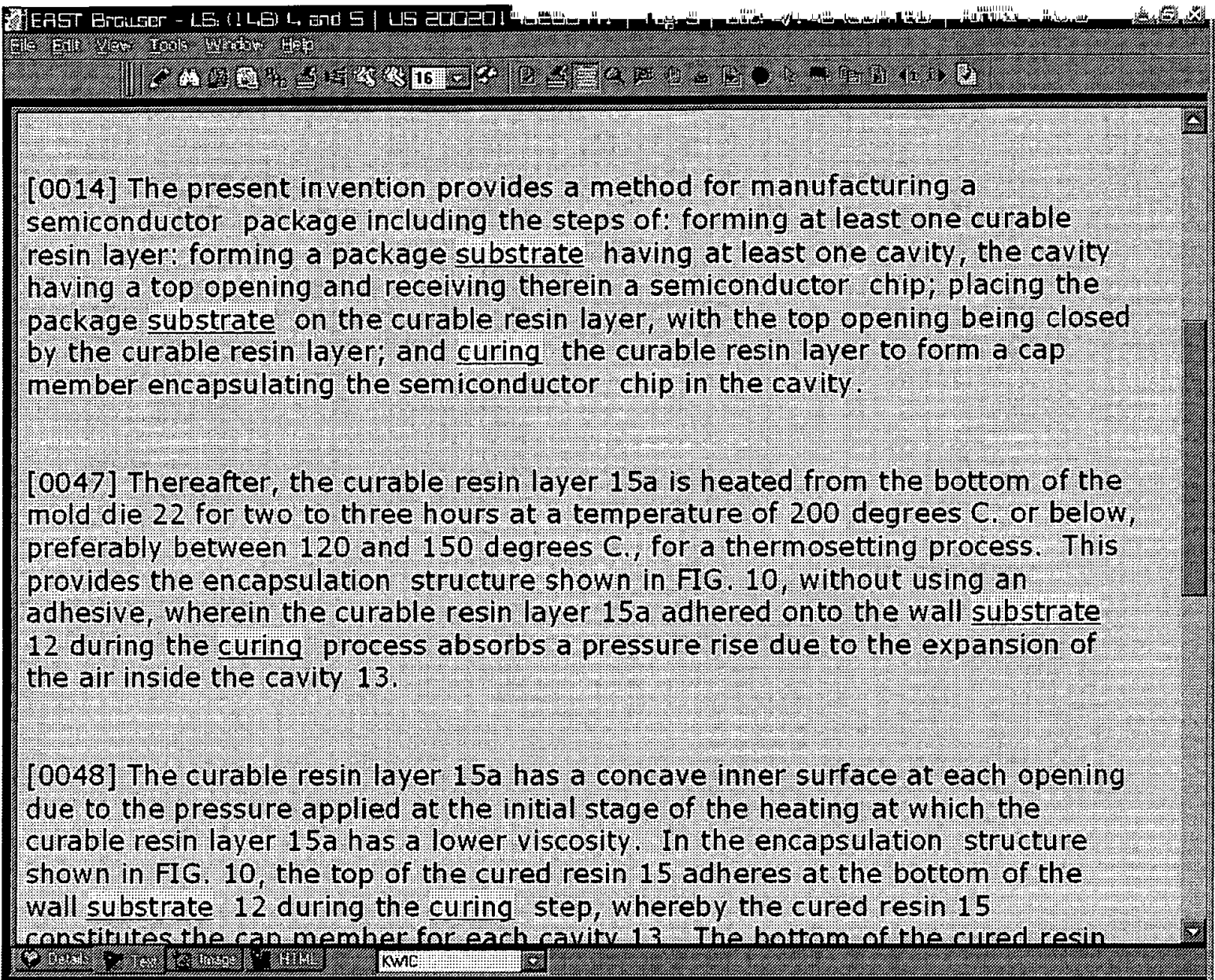


Brief Summary Text - BSTX (13):

It has now been found that a relatively simple and effective process is provided for chemically bonding a thermoset resin to a poly-p-xylylene substrate by exposing the poly-p-xylylene to a cold plasma in a confined region for a period of time sufficient to chemically modify the surface of the poly-p-xylylene exposed to the cold plasma, depositing an uncured liquid thermosetting resin over the chemically modified poly-p-xylylene surface ; and then heating the thermosetting resin and poly-p-xylylene at a temperature and time sufficient to both cure the thermosetting resin into a solid thermoset resin and chemically bond the chemically modified surface of the poly-p-xylylene to the thermoset resin in situ.

Detailed Description Text - DETX (2):

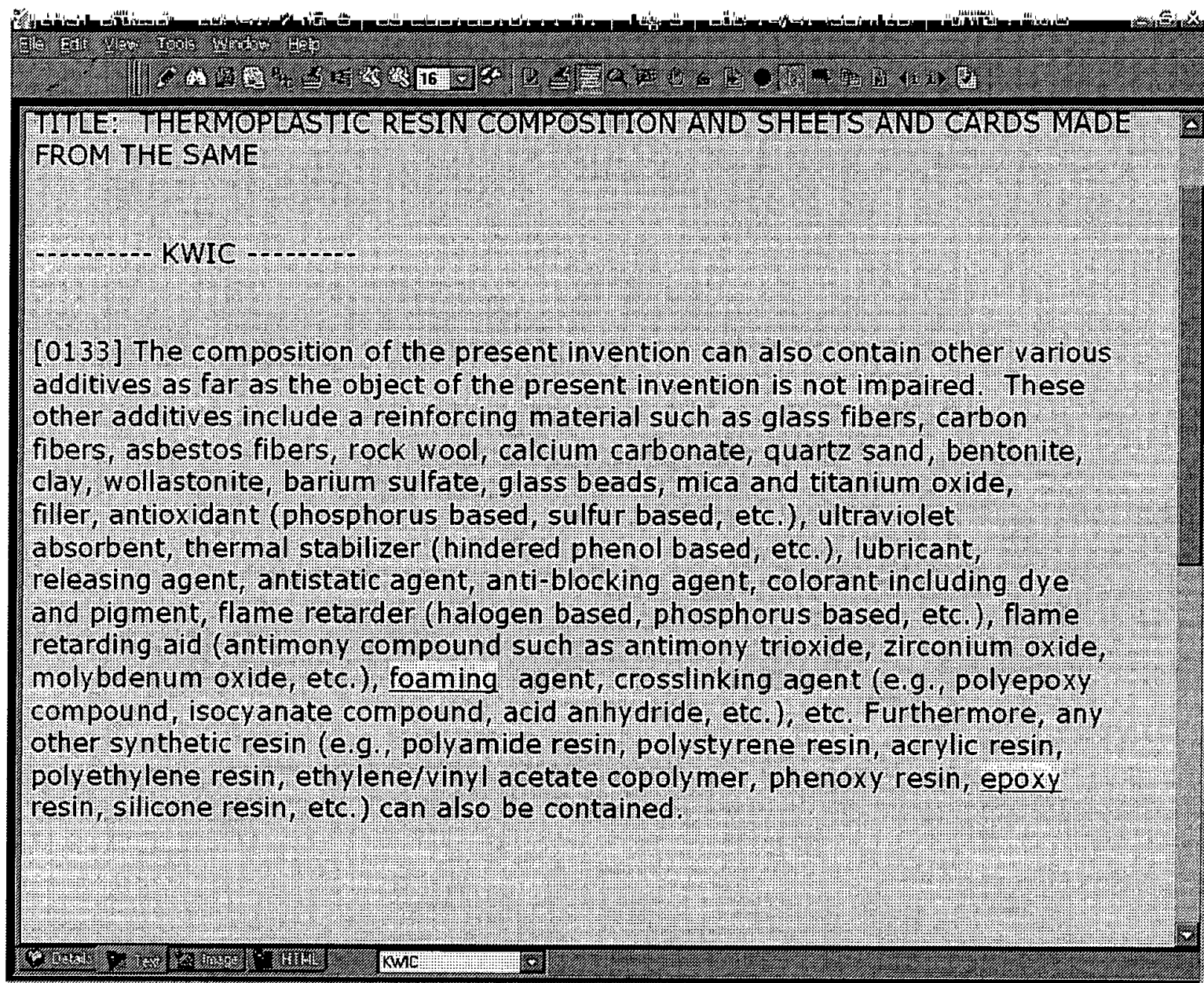
The basic process of the present invention may be more explicitly defined as a process for chemically bonding a thermoset resin to a poly-p-xylylene substrate comprising: providing a cold plasma within a confined region evacuated to a pressure lower than about 100 torr; exposing at least one surface of the poly-p-xylylene substrate directly to said plasma within said region for a period of time sufficient to incorporate oxygen-containing functional groups therein which contain active hydrogen atoms; depositing an uncured liquid thermosetting resin capable of chemically reacting with active hydrogen atoms over the plasma treated poly-p-xylylene surface ; and heating the thermosetting resin and poly-p-xylylene at a temperature at which the thermosetting resin

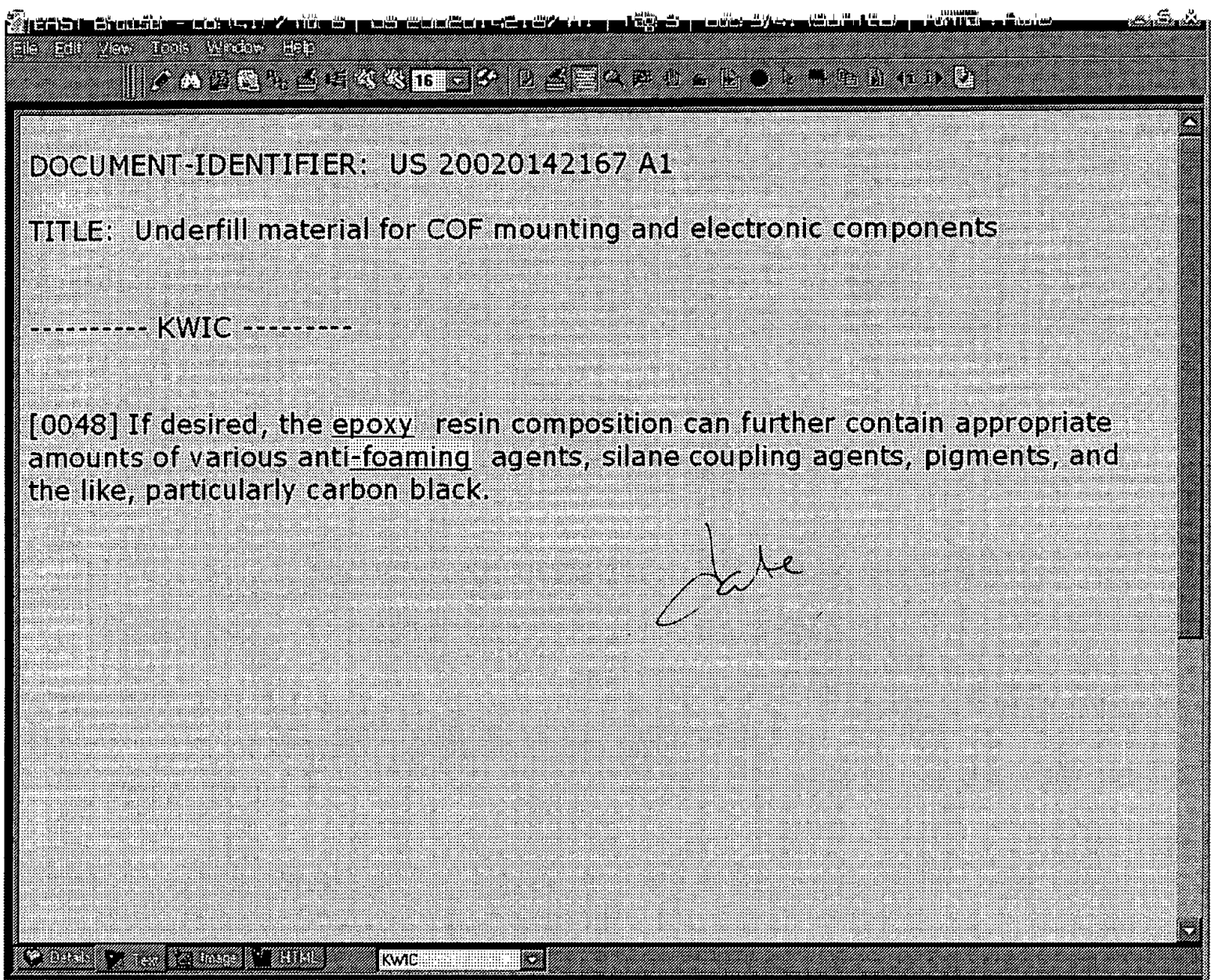


[0014] The present invention provides a method for manufacturing a semiconductor package including the steps of: forming at least one curable resin layer; forming a package substrate having at least one cavity, the cavity having a top opening and receiving therein a semiconductor chip; placing the package substrate on the curable resin layer, with the top opening being closed by the curable resin layer; and curing the curable resin layer to form a cap member encapsulating the semiconductor chip in the cavity.

[0047] Thereafter, the curable resin layer 15a is heated from the bottom of the mold die 22 for two to three hours at a temperature of 200 degrees C. or below, preferably between 120 and 150 degrees C., for a thermosetting process. This provides the encapsulation structure shown in FIG. 10, without using an adhesive, wherein the curable resin layer 15a adhered onto the wall substrate 12 during the curing process absorbs a pressure rise due to the expansion of the air inside the cavity 13.

[0048] The curable resin layer 15a has a concave inner surface at each opening due to the pressure applied at the initial stage of the heating at which the curable resin layer 15a has a lower viscosity. In the encapsulation structure shown in FIG. 10, the top of the cured resin 15 adheres at the bottom of the wall substrate 12 during the curing step, whereby the cured resin 15 constitutes the cap member for each cavity 13. The bottom of the cured resin





The finality of the OA mailed _____ is withdrawn
in view of the new grounds of objection below.

TITLE: Conductor bodies attached adhesive sheet, process for producing semiconductor device and semiconductor device

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Detail Description Paragraph - DETX (27):

[0057] A thermal activation latent epoxy resin curing agent is a curing agent of a type that does not react with epoxy resins at a room temperature but activates by a heat of a certain temperature or more and reacts with epoxy resins. As kinds (divided by activation processes) of thermal activation latent epoxy resin curing agents, there are those which generate active species (anion, cation) by a chemical reaction due to heating, those which are stably dispersed in an epoxy resin around a room temperature but become compatible and dissolved in an epoxy resin at a high temperature to start a curing reaction, those which are a type of curing agent contained in molecular sieves which is released at a high temperature to start a curing reaction, and those encapsulated in a micro-capsule, etc. These thermal activation latent epoxy resin curing agents can be used alone or by combining different kinds, and among these, it is preferable to use dicyanamide, imidazole compound, or a mixture of the dicyanamide and imidazole compound.

